



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

AMS

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,762	10/17/2003	Sumihito Morita	9281-4709	1985
757	7590	07/09/2004	EXAMINER	
BRINKS HOFFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60610			CHEN, TIANJIE	
			ART UNIT	PAPER NUMBER
			2652	

DATE MAILED: 07/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/688,762	Applicant(s) MORITA ET AL.	
	Examiner Tianjie Chen	Art Unit 2652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09/949,251.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

BEST AVAILABLE COPY

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/17/2003X2</u> . | 6) <input type="checkbox"/> Other: ____. |

Non-Final Rejection

Priority

1. Applicant is reminded that in order for a patent issuing on the instant application to obtain the benefit of priority based on priority papers filed in parent Application No. 09/949,251 under 35 U.S.C. 119(a)-(d) or (f), a claim for such foreign priority must be made in this application. In making such claim, applicant may simply identify the application containing the priority papers.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Heim et al (US 5,793,578).

Heim et al shows a thin film magnetic head in Fig. 17, including a lower core layer S2/P1, a bottom pole layer formed on the lower core layer integrally therewith, a nonmagnetic gap layer 111 formed on the bottom pole layer, an upper core layer P2 to be joined to the top the gap layer at a surface facing a recording medium, and coil layer 64 formed behind the bottom pole layer in the height direction, for inducing a recording magnetic field in the lower core layer and the upper core layer; wherein upper core layer includes a tip region next to "90" in Fig. 17 exposed with track width the surface facing the recording medium, and a rear end region 90 extending backward from the end edge of the tip region in the height direction so that the width

Art Unit: 2652

dimension the track width direction gradually increases in the height direction (Fig.9); and wherein the space between the tip region of the upper core layer and the bottom pole layer includes a portion extending backward from the surface facing the recording medium in the height direction, in which only a gap layer present, and a gap depth regulated by the end edge of the portion, and a portion extending backward from the end edge the height direction, in which an insulating layer 98 present together with the gap layer so that the gap between the tip region and the bottom pole layer in the portion including insulating layer is larger than the gap layer in the portion comprising only the gap layer, wherein the rear end surface 90 of the bottom pole layer is inclined so that the thickness of the bottom pole layer gradually decreases in the backward height direction, and the gap depth is regulated by the distance between the top of the rear end surface, and the surface facing the recording medium; and wherein a first insulating layer I1 is formed to extend from the top of the rear end surface of the bottom pole layer to the lower core layer, a planarized surface (the top of 111) is formed at the top of the first insulating layer to be continued from the top of the bottom pole layer; and the tip region of the upper core layer is formed to extend from the gap layer formed on the bottom pole layer to the gap layer formed on the planarized surface or to the planarized surface.

With regard to claim 13, Heim et al further shows that the first insulating layer I1 has a coil forming surface (the top of I1 layer) which formed behind the planarized surface the height direction and lower than the planarized surface (the top of 111), coil layer 64 being formed on the coil forming surface through the gap layer 111.

Conclusion

3. The prior art made of record in PTO-892 Form and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tianjie Chen whose telephone number is (703) 305-7499. The examiner can normally be reached on 8:00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


TIANJIE CHEN
PRIMARY EXAMINER